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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Laura Hadden

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EXAMINER

LI, SHI K

ART UNIT

PAPER NUMBER

2613

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DELIVERY MODE

12/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/624,471	Applicant(s) HADDEN ET AL.	
	Examiner Shi K. Li	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9,10,14,15,19-30 and 34-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9,10,14,15,19-30 and 34-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9 October 2008 has been entered.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim(s) 1-5, 9-10, 14-15 and 19-23 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled “Clarification of ‘Processes’ under 35 U.S.C. 101”). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-5, 9-10, 14-15 and 19-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites the limitation “identifying at least one dominant source which impacts each identified optical effect; identifying at least one base variable upon which each identified dominant source depends” in lines 5-8 of the claim. The Applicant states in the remarks that the limitation “identifying at least one dominant source which impacts each identified optical effect” is supported by the paragraph on page 11, lines 9-12. That is, the dominant sources are dispersion, self-phase modulation, cross-phase modulation and four-wave mixing. Claim 14 depends on claim 1 and recites the limitation “wherein the at least one identified optical effect is a noise effect”. However, instant application does not teach that dispersion, self-phase modulation, cross-phase modulation and four-wave mixing impact noise.

Claim 2 recites the limitation “calculating the impact of each identified dominant source based on the calculated value of each identified base variable” in lines 4-5 of the claim. The Applicant states in the remarks that the limitation is supported by Equation 2 on page 15. However, equation 15 only suggests that effects of dispersion, self-phase modulation, cross-phase modulation and four-wave mixing depend on the base variables A, B, C and D without describing how to calculate the actual values.

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6. Claims 1-5, 9-10, 14-15, 19-30 and 34-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites the limitation “approximating a value for the impact of each identified optical effect on the performance of a signal as a function of each identified dominant source and each identified base variable” in lines 9-11 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 2 recites the limitation “calculating the value of each identified base variable” in lines 3 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 2 recites the limitation “calculating the impact of each identified dominant source based on the calculated value of each identified base variable” in lines 4-5 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 2 recite the limitation “calculating the impact of each identified optical effect in the segment based on the calculated value of the impact of each identified dominant source” in lines 6-7 of the claim. However, instant specification does not describe the limitation in such a

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way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 2 recite the limitation “calculating the resulting performance of the signal resulting from the optical effects encountered while passing through the segment” in lines 8-9 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 3 recites the limitation “calculating the resulting performance of the signal resulting from the optical effects encountered while passing through the node at which the segment terminates” in lines 2-3 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 4 recites the limitation “re-calculating the resulting performance of the signal using a measure of the current performance” in lines 3-4 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 24 recites the limitation “a quantifier to determine the value of at least one identified dominant source upon which at least one identified optical effects that impact the viability of the signal path is dependent” in lines 3-5 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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Claim 24 recites the limitation “a quantifier to determine the value of at least one identified base variable upon which each identified dominant source is dependent” in lines 6-7 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 24 recites the limitation “an approximator to determine the value of the impact of each identified optical effect on the viability of the signal path” in lines 8-9 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 24 recites the limitation “a calculator to determine the impact of each identified optical effect on the performance of a signal passing through a segment in the signal path” in lines 10-11 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 24 recites the limitation “a comparator to determine if the resulting performance of the signal at the end of the signal path satisfies an acceptable threshold” in lines 12-13 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 26 recites the limitation “a quantifier to determine the value of at least one identified dominant source upon which at least one identified optical effects that impact the

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viability of the signal path is dependent for the at least one downstream segment” in lines 5-7 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 26 recites the limitation “a quantifier to determine the value of at least one identified base variable upon which each identified dominant source is dependent” in lines 8-9 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 26 recites the limitation “an approximator to determine the value of the impact of each identified optical effect on the viability of the signal path along the at least one downstream segment” in lines 10-11 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 26 recites the limitation “a calculator to determine the impact of each identified optical effect on the performance of a signal passing through the at least one downstream segment” in lines 12-13 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 26 recites the limitation “a communicator for communicating the resulting performance value along the at least one downstream segment to the corresponding downstream node” in lines 14-15 of the claim. However, instant specification does not describe the limitation

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in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 recites the limitation “a receiver for receiving a previous performance value from the at least one upstream node along the segment interconnecting the two nodes” in lines 6-7 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 recites the limitation “a quantifier to determine the value of at least one identified base variable dominant source upon which at least one identified optical effects that impact the viability of the signal path are is dependent for the at least one downstream segment” in lines 8-10 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 recites the limitation “a quantifier to determine the value of at least one identified base variable upon which each identified dominant source is dependent” in lines 11-12 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 recites the limitation “an approximator to determine the value of the impact of each identified optical effect on the viability of the signal path along the at least one downstream segment” in lines 13-14 of the claim. However, instant specification does not describe the

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limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 recites the limitation “a calculator to determine the impact of each identified optical effect on the performance of a signal passing through the at least one downstream segment” in lines 15-16 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 recites the limitation “a communicator for communicating the resulting performance value along the at least one downstream segment to the corresponding downstream node” in lines 17-18 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 34 recites the limitation “determine the value of at least one identified base variable upon which at least one identified dominant source that impacts at least one identified optical effect is dependent” in lines 5-7 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 34 recites the limitation “determine the value of the impact of each identified dominant source for each identified optical effect” in lines 8-9 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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Claim 34 recites the limitation “determine the value of the impact of each identified optical effect on the viability of the signal path” in lines 10-11 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 34 recites the limitation “determine the impact of each identified optical effect on the performance of a signal passing through a segment in the signal path” in lines 12-13 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 34 recites the limitation “determine if the resulting performance of the signal at the end of the signal path satisfies an acceptable threshold” in lines 14-15 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 35 recites the limitation “determine the value of at least one identified base variable upon which at least one identified dominant source that impacts at least one identified optical effect is dependent” in lines 5-6 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 35 recites the limitation “determine the value of the impact of each identified dominant source upon which each identified optical effects that impacts the viability of the signal path is dependent for the at least one downstream segment” in lines 7-9 of the claim. However,

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instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 35 recites the limitation “determine the value of the impact of each identified optical effect on the viability of the signal path along the at least one downstream segment” in lines 10-11 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 35 recites the limitation “determine the impact of each identified optical effect on the performance of a signal passing through the at least one downstream segment” in lines 12-13 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 35 recites the limitation “communicate the resulting performance value along the at least one downstream segment to the corresponding downstream node” in lines 14-15 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 36 recites the limitation “receive a previous performance value from the at least one upstream node along the segment interconnecting the two nodes” in lines 7-8 of the claim. However, instant specification does not describe the limitation in such a way as to enable one

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skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 36 recites the limitation “determine the value of at least one identified base variable upon which at least one identified dominant source that impacts at least one identified optical effect is dependent” in lines 9-10 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 36 recites the limitation “determine the value of the impact of each identified dominant source upon which each identified optical effects that impacts the viability of the signal path is dependent for the at least one downstream segment” in lines 11-13 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 36 recites the limitation “determine the value of the impact of each identified optical effect on the viability of the signal path along the at least one downstream segment” in lines 14-15 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 36 recites the limitation “determine the impact of each identified optical effect on the performance of a signal passing through the at least one downstream segment” in lines 16-17 of the claim. However, instant specification does not describe the limitation in such a way as to

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enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 36 recites the limitation “communicate the resulting performance value along the at least one downstream segment to the corresponding downstream node” in lines 18-19 of the claim. However, instant specification does not describe the limitation in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 27 and 29-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 27 recites the limitation "The apparatus" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 29 recites the limitation "The apparatus" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 30 recites the limitation "The apparatus" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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13. Claims 1-3, 5, 9-10, 14-15, 20, 24-26, 28 and 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Levandovsky et al. (U.S. Patent 7,095,956 B2).

Regarding claims 1-3 and 24-25, Levandovsky et al. teaches in FIG. 2 path validation unit 200. Levandovsky et al. teaches in col. 3, lines 49-60 that noise is an optical effect that impacts the viability of the signal path. Levandovsky et al. teaches in col. 21, line 8 that four-wave mixing is a principal source of noise. Levandovsky et al. teaches in col. 25, lines 20-22 that the noise power depends on the optical power per wavelength, number of wavelengths, fiber dispersion parameter, which, in term, depends on fiber type. Levandovsky et al. teaches in col. 23, line 25 to approximate the impact by using noise figure and teaches in col. 4, lines 24 that $SNR_k = NF_k / SNR_o$. Levandovsky et al. teaches calculating noise figure for each chain of k elements (e.g., k segment of fiber). Finally Levandovsky et al. teaches in FIG. 4 to compare the SNR and bit error rate for the path with a range for determining the path's viability.

Regarding claim 5, Levandovsky et al. teaches in col. 17 fiber type. The fiber between two nodes is a segment and a segment comprises spans.

Regarding claims 9-10, Levandovsky et al. teaches in col. 21 dispersion, cross-phase modulation, four-wave mixing. Levandovsky et al. teaches in col. 15 self-phase modulation.

Regarding claims 14-15, Levandovsky et al. teaches in col. 21 stimulated Brillouin scattering and stimulated Raman scattering, and in col. 23 amplified spontaneous emission.

Regarding claim 20, Levandovsky et al. teaches in col. 19 bit error rate.

Regarding claims 26 and 28, Levandovsky et al. teaches in col. 5, lines 40-45 calculating noise figure at each NE on a path route using cumulative noise-related information received from a previous element on the path.

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Regarding claims 34-36, Levandovsky et al. teaches in col. 3, lines 44-45 software residing in a memory.

Claim Rejections - 35 USC § 103

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

15. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levandovsky et al. (U.S. Patent 7,095,956 B2) in view of Solheim et al. (U.S. Patent 7,190,902 B2).

Levandovsky et al. has been discussed above in regard to claims 1-3, 5, 9-10, 14-15, 20, 24-26, 28 and 34-36. The difference between Levandovsky et al. and the claimed invention is that Levandovsky et al. does not teach use measured data in place of estimated data. Solheim et al. teaches in col. 4, lines 55-63 that use of measured as opposed to estimated data might increase the network deployed reach by 50%. One of ordinary skill in the art would have been motivated to combine the teaching of Solheim et al. with the path validation method of Levandovsky et al. and use measured data, whenever available, in place of estimated data because measured data is more reliable than estimated data. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use measured as opposed to estimated data whenever measured data is available, as taught by Solheim et al., in the path validation method of Levandovsky et al. because measured data is more reliable than estimated data.

16. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levandovsky et al. (U.S. Patent 7,095,956 B2) in view of Denkin et al. (U.S. Patent 6,980,740 B1).

Levandovsky et al. has been discussed above in regard to claims 1-3, 5, 9-10, 14-15, 20, 24-26, 28 and 34-36. The difference between Levandovsky et al. and the claimed invention is

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that Levandovsky et al. does not teach linear approximated function. However, linear functions are one of the simplest functions that are used in calculation. Denkin et al. teaches in col. 1, lines 26-30 that the effect of Ramon scattering is approximately linear. One of ordinary skill in the art would have been motivated to combine the teaching of Denkin et al. with the path validation method of Levandovsky et al. because linear function is simple and easy for calculation. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use linear approximated function, as taught by Denkin et al., for calculating the effect of Raman scattering in the path validation method of Levandovsky et al. because linear function is simple and easy for calculation.

17. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levandovsky et al. (U.S. Patent 7,095,956 B2).

Levandovsky et al. has been discussed above in regard to claims 1-3, 5, 9-10, 14-15, 20, 24-26, 28 and 34-36. Regarding claims 21-23, Levandovsky et al. either teach signal-to-noise ratio, Q and penalty points or they are common performance measurements that are well known to one of ordinary skill in the art. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use signal-to-noise ratio, Q or penalty points for performance measurement because they are well known in the art and their use would have yield predictable results to one of ordinary skill in the art at the time of the invention.

18. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levandovsky et al. (U.S. Patent 7,095,956 B2) in view of Beine et al. (U.S. Patent 6,701,087 B2).

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Levandovsky et al. has been discussed above in regard to claims 1-3, 5, 9-10, 14-15, 20, 24-26, 28 and 34-36. Levandovsky et al. teaches in col. 5, lines 30-40 that the transmission of cumulative noise-related information is via signaling protocols similar to RSVP or CR-LDP. It is well known in the art that RSVP or CR-LDP is conveyed using OSC. Therefore, either Levandovsky et al. suggests using OSC for communicating performance value or it is obvious to use OSC for communicating performance value. Furthermore, Examiner cites Beine et al. for teaching communicating parameters via an OSC channel (col. 25, lines 49-50). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use OSC for communicating performance parameters, as taught by Beine et al., in the path validation method of Levandovsky et al. because using OSC for such purpose is well known in the art and its use would have yield predictable results to one of ordinary skill in the art at the time of the invention.

Response to Arguments

19. Applicant's arguments filed 9 October 2008 have been fully considered but they are not persuasive.

The Applicant argues:

Claim 1 as amended includes the limitation "identifying at least one dominant source which impacts each identified optical effect". Support for this limitation is provided at page 11, lines 9-12 as follows:

It is known that, for certain systems, dispersion, self-phase modulation, cross-phase modulation and four-wave mixing effects dominate the overall signal distortion. Different systems will exhibit different dominant effects.

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The above limitation is not taught by Levandovsky.

The Examiner disagrees. Levandovsky et al. teaches in col. 21, lines 2-9 the principal sources of noises are due to non-linear scattering and wave mixing. Also, the Applicant admits the fact that these dominant sources, i.e., dispersion, self-phase modulation, cross-phase modulation and four-wave mixing effects, dominate the overall signal distortion is known prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Shi K. Li/

Primary Examiner, Art Unit 2613